DOCUMENT RESUME

ED 249 816 FL 014 646

AUTHOR Johnson, Tia; Sheetz-Brunetti, Judy
TITLE English Pyramids: Using Hierarchical Diagrams for Communication Activities.
PUB DATE [84]
NOTE 29p.
PUB TYPE Reports - Evaluative/Feasibility (142)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Class Activities; Cultural Context; *Diagrams; *Discourse Analysis; *English; *English (Second Language); Language Research; Paragraphs; Second Language Instruction; Writing Difficulties; *Writing Instruction

ABSTRACT

The pyramid, or hierarchical diagram, is used in teaching writing English as a second language (ESL) as a visual representation of the way English speakers and writers organize ideas, for comparison with discourse organization in other cultures. A common problem of ESL students is an inability to organize ideas hierarchically. One class activity using the pyramid for teaching concept hierarchies is a sentence-level exercise using the Chinese zodiac to organize ideas about personality traits and practice the logic expected of English prose. Two comprehension activities at the discourse level are a listening exercise working with the statement example relationship and a reading exercise for analyzing discourse in newspaper articles. Another exercise uses pyramid diagrams to adapt textbook grammar exercises on subordinate clauses for use in understanding dictionary definitions. The technique can also be used for a variety of lexical-level activities. The benefits of this technique include the visual representation of logical organization, placement of emphasis on ideas rather than grammar, improved classroom dynamics, and some degree of success for students at all levels. (MSE)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)
This document has been reproduced as received from the person or organization originating it.
Minor changes have been made to improve reproduction quality.
Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

ENGLISH PYRAMIDS: USING HIERARCHICAL DIAGRAMS FOR COMMUNICATION ACTIVITIES

Tia Johnson
Judy Sheetz-Brunetti

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Judy Brunetti

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

ED249816

The pyramid, or hierarchical diagram, is a visual representation of a system of things or ideas which are ranked according to generality or importance. At each level of the pyramid, the members of that level are either a super- or sub-category of another, with the content moving from greater to lesser further down on the pyramid (see Figure 1).

THE PROBLEM

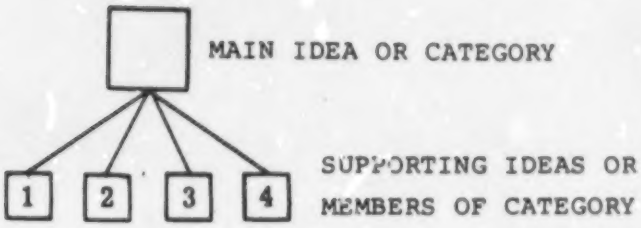
We use the diagrams to work on a problem that many students have: understanding the way English speakers and writers organize their ideas, as compared with the way ideas in discourse are organized in other cultures.

In English it is necessary to support a generalization with facts or examples to convince the reader of its validity. The writer or speaker states his main idea and then proceeds to analyze its supporting parts. Textbook author Barbara Seale (1978) called this kind of breakdown of large parts into smaller and still smaller parts an

FL014 640

FIGURE 1

Pyramid or Hierarchy Diagram



84528-02

"analytic game which the English-speaking mind loves to play." More than a game, it is a system which the reader expects, and the ESL student must adhere to. The hierarchical system is also seen by Edward Hall as "an example of how the majority of Western peoples have been trained to think."

Of course, our ESL students may or may not have been trained to organize ideas in this rather abstract way. We can see this by examining some examples of student writing that are not organized hierarchically. In a classroom assignment, one student was asked to describe his personality and he began, "I think I am a friendly person. One reason is that I always talk to everybody. Another reason is I like sports." His irrelevant statement is typical of much ESL student writing. In another assignment, students were asked to describe the physical layout of the library. One student wrote:

> The college library is very big. Libraries are necessary for college students. Libraries contain all knowlege, and we can learn many interesting things. We are lucky because here we can learn evzrything if we want. If we read, we can know all these things for using in our lives.

This person never got around to the assigned task of describing the library, but merely listed the benefits of libraries in general.

In such examples of student work, we suggest that the main problem is not with vocabulary or grammar. The problem is that the supporting examples seem inappropriate and

illogical. The examples are not what we expect, and so the paragraphs do not make sense in the way we expect them to.

When this occurs, it is not enough to simply tell a student that his style is awkward or lacks unity. He does not understand the criticism and continues to make the same mistakes. The instructor's job, then, is to present the accepted system of idea relationships in such a way that the student can understand and utilize it.

IDEAS SUPPORTED BY RESEARCH

Research in language aquisition and cross-cultural cognition studies also support the idea that people of different cultures vary in their organization of ideas. Kaplan (1966), in one of the early papers on contrastive idea organization, graphically depicts different logical styles in writing: English style as a straight arrow because it is direct, Semitic as forward moving parallels because these writers often use coordinate structures, Oriental as circular (i.e., indirect), and Romance languages and Russian logic as a zigzag, which represents irrelevancies and deviations from the main topic (see Figure 2).

Bar-Lev (1982) has found cultural differences in the use of general statements. He states that Anglos and Orientals are similar in their preference for abstract generalizations. However, Orientals sometimes use

FIGURE 2

Kaplan's Graphic Representation of Rhetorical Styles

84528-03

generalizations and indirect answers when Anglos expect a more specific and direct answer. He found Mexicans and Saudis more attentive to specific events and their motivations.

Studies by Schultz and diVesti (1972) have shown that Western educated persons tend to group things categorically. They found that American high school students use name clustering (the whole and its aspects) even when that violates the organizational pattern of the presented information. They claim that American Anglos have a strong preference for hierarchically arranged ideas, and put them in that order even if the ideas are presented differently.

Martin (1980) also states that Western-style education trains students to generalize and relate information along categorical lines. In her dissertation at USC, she found that foreign, and especially non-Western, students are not as proficient as native English speakers at reading information arranged hierarchically.

In conclusion, research in language aquisition and cross-cultural cognition also finds that there are cultural differences in the ways people organize their ideas in written and oral discourse, and especially ideas that may be related hierarchically.

A SOLUTION

Our solution to this problem of cultural differences is the pyramid diagram which clarifies the concept of idea hierarchies.

DISCOURSE-LEVEL ACTIVITIES

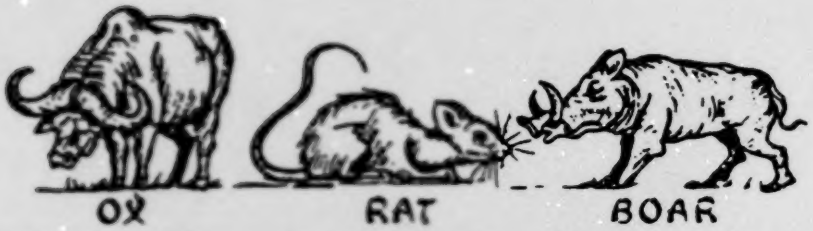
An example of a classroom activity which does this is the Chinese Zodiac (see Figure 3). Students are always interested in the content in this activity because most of the Asians are familiar with the Chinese zodiac. They also find it amusing, plus the descriptive adjectives are useful vocabulary

First, to familiarize stuedents with the hierarchy format, we do a simple activity that asks them to think about word meanings. Students are given a handout with several blank pyramids with boxes to fill in, and are asked to supply examples for: How does a shy person behave? What kind of clothing might an eccentric person wear? etc. We then discuss the appropriateness of examples.

After this, we do the sentence-level exercise shown in Figure 4. Here, the instructor reminds students that the "legs" of the pyramid must be descriptive of the personality trait in the opening sentence. The examples must be related and subordinate to the main idea. Because this is visual, little verbal explanation is needed when student ideas do

FIGURE 3

Sample of Chinese Zodiac



OX

1925, 1937, 1949, 1961

Bright, patient and inspiring to others. You can be happy by yourself, yet make an outstanding parent. Marry a Snake or Cock. The Sheep will bring trouble.

RAT

1924, 1936, 1948, 1960

You are ambitious yet honest. Prone to spend freely. Seldom make lasting friendships. Most compatible with Dragons and Monkeys. Least compatible with Horses.

BOAR

1935, 1947, 1959, 1971

Nobel and chivalrous. Your friends will be lifelong, yet you are prone to marital strife. Avoid other Boars. Marry a Rabbit or a Sheep.

84528-01

BEST COPY AVAILABLE

FIGURE 4

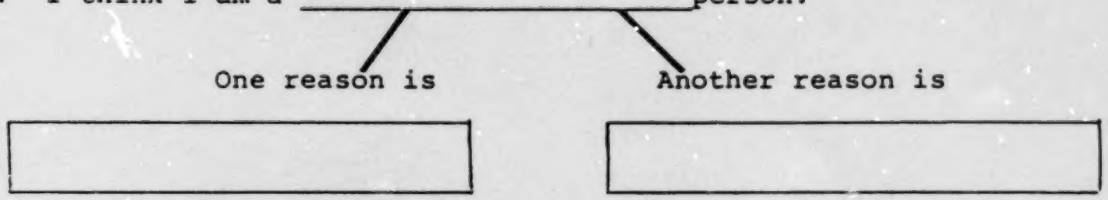
Sentence-Level Exercise for Chinese Zodiac

CHINESE ZODIAC

PERSONAL QUALITIES: lucky, articulate, shy, eccentric, passionate, wise, vain, popular, friendly, impatient, elegant, creative, intelligent, selfish, loyal, honest, studious, noble, ambitious, bright, aggressive, courageous.

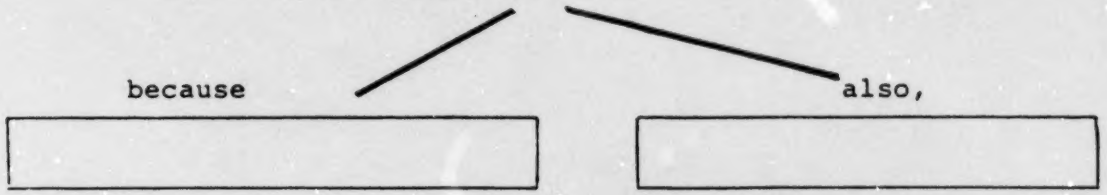
WRITING EXERCISE: Fill in the blanks to make a true sentence about your character. Be sure to give reasons that explain your statement.

1. I think I am a _____ person.



2. My sign of the zodiac is the _____. I think this is an / is not

accurate representation of me



3. COMPOSITION. Describe yourself in one paragraph. Begin the paragraph a general statement about your character. After the general statement, give a specific instance or specific examples to prove it. Tell about something that you once did, or things that you regularly do that support the statement.
   Begin with:

   Basically, I think I am a _____ person.
   Let me tell you why...

84528-05A

not fit. The instructor can simply point to the diagram and show that the idea belongs on a higher level, a more general level, or that it does not relate back to the topic. So the diagram clarifies the relationship of the ideas by mapping out visually how they are related. This is a useful pedagogical device for the teacher faced with trying to explain why a certain idea is irrelevant or too general.

In addition, this short pre-writing exercise encourages the reluctant student writer who is intimidated by lengthier compositions. These exercises are a stepping stone to longer prose, or stand well alone.

The last assignment is for the students to try a full composition based on the idea hierarchy. In this last part, we remind them that although the pyramid diagram is not used, the ideas are still related in the same way.

After doing a number of these exercises, students have a better idea of the kind of logic expected in English prose. In order to write a successful expository paragraph, they discover they need to think the way the English-speaking reader thinks. This is not often easy. Students may find the constraints of analyzing one topic in depth to be more difficult than the writing style they are accustomed to, but with practice, most can succeed. As one of Dr. Bar-Lev's students said, "I don't like writing this way, but I will do it for you because you're the teacher." That is all we ask, that the student recognize the difference in logical organization from his own cultual style, and be able to produce it for English readers.

The exercise we have seen here is a general statement with supporting examples. The pyramid hierarchy may be applied to other kinds of writing, such as personal opinions or value judgements ("I think that Americans are wasteful/friendly/selfish/generous"), enumerations ("Several factors make San Diego a pleasant town to live in"), reasons for or against ("There are many advantages/disadvantages of owning a car"), and descriptions or exemplifications ("Driving on the freeways can be frustrating").

The next two activities are comprehension activities at the discourse level: the first is for listening, and the second is a reading activity.

The text for the first activity is modified from IT'S UP TO YOU, an ESL job search textbook. The book asks typical, very specific comprehension questions. Instead we use the pyramid diagram shown in Figure 5.

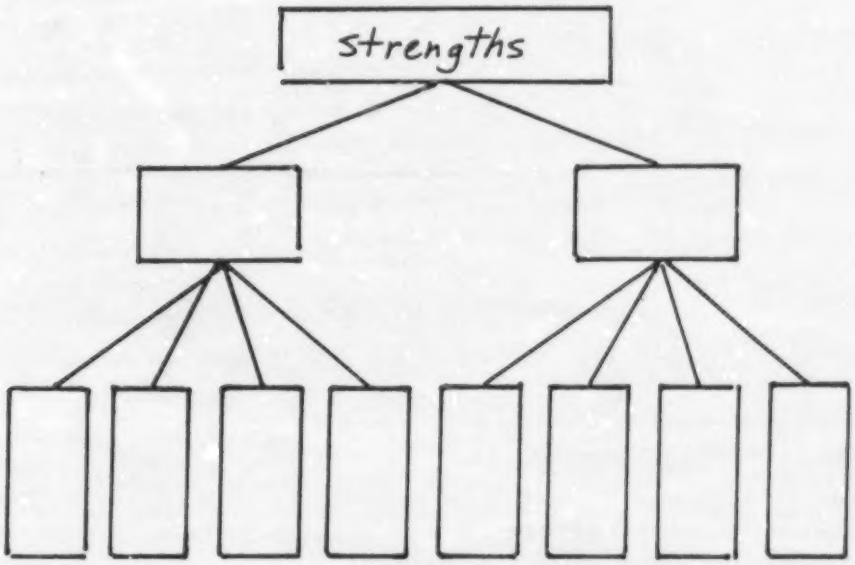
This activity again works with the statement: example relationship. A general statement should be supported by relevant and more specific subordinate information. This diagram is completely blank, but in the beginning you can help your students by filling in some of the boxes.

Please listen and fill in your diagram with the information given by the job applicant.

--What are some of your strong points?
--I'm very efficient. I worked for two years in a very busy office where it was very important that I do things on time. I type 70 words a minute with no

FIGURE 5

Job Strengths Exercise



84528-04

errors, correctly. And during those two years, I learned how to run several business machines.
--Do you have any other strengths?
--I had to be well-organized on this job. I was typing for four different people, and I had to be sure that I did the work on time and that I sent it to the right place. It was very important that I kept my desk organized because I had so much work to do.

During this activity, students focus on the ideas presented and their structure. They are being trained to listen for the macrostructure and ideas. They learn to disregard unfamiliar syntax or vocabulary and work with what they do understand.

Also, because it is not necessary to know every vocabulary item and grammar structure to fill in the boxes correctly, this exercise is a great equalizer among the students. Students with low-level English skills find that they can fill in the information just as quickly and as accurately and sometimes better than more advanced language learners.

Before using this appproach, we found that students didn't go beyond the general statement. Their typical response in mock job interviews was "I am responsible." When asked to give examples, they gave further ganeralizations, such as "I am dependable." After doing this activity, the students are anxious to use the format to talk about themselves (as in the Chinese exercise) and give their own job strengths and examples. Although the main task of this exercise is listening comprehension, a natural follow-up is oral and/or written output.

The pyramid hierarchy can be applied to other types of listening activities, such as discussions about job changes, good and bad aspects of a job, job title and duties (available on job hotline phone recordings from major employers), descriptions of tool cribs and sections, grocery stores and aisles, and different jobs and equipment needed.

For reading activities, we often choose newspaper articles because many students claim that they can't read the newspaper and diagram exercises show them that they can, and also because newspapers are such an important source of information in our society.

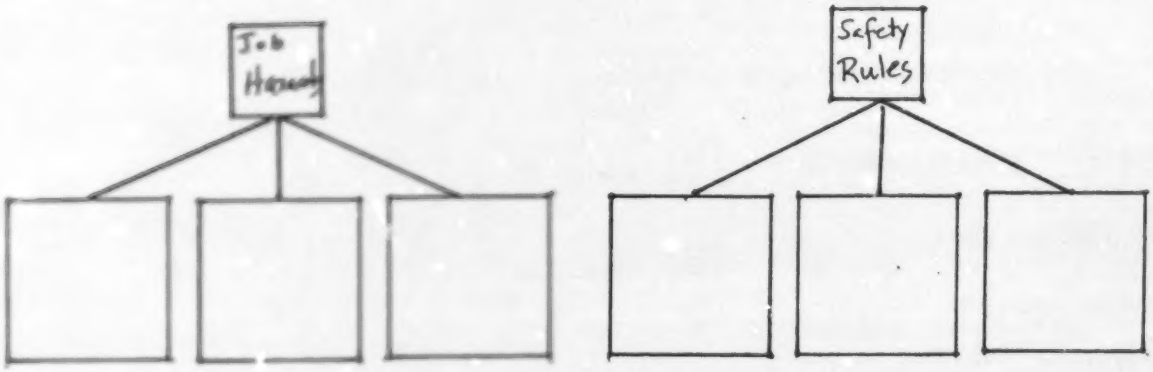
An article from the San Diego Union, see Figure 6, describes a convention regarding job safety and job hazards. The students are given the diagram first as a pre-reading activity. We talk about any filled-in boxes and the general topic. Then the students read and fill in the diagram.

The information the students are asked to look for is not the only information in the article--we emphasize this information and its structure because of its relevance to the ESL job search class they're in. Also note that the article does <u>not</u> follow a nice clean PD. Carrell (1983) divides information-structures into two groups: those dealing with content and those dealing with form. In the Chinese Zodiac and Job Strengths activities, both the content and formal structures coincided exactly, but with newspaper writing the formal structure differs from the content structure. We use PDs to teach the students to look for the content in a newpaper article.

FIGURE 6

Job Hazards Activity

Directions: Fill in the diagram with information from the newspaper article on the next page.



Conference in San Diego

Union Workers Discuss Job Safety, Hazards

By LAURIE JONES, Times Staff Writer

The union hall was decorated with posters that showed, in grisly detail, an all worker's alarming harms, the maps that indicate rates of a dental technician's leg, the deformed foot of a truck driver.

On nearby tables books and brochures gave the latest information on manufacturing codes, federal safety laws, the rights of injured workers and hearing noise levels.

Scattered around the room were study groups — telephone operators, machinists, steelworkers, firefighters, more than 70 union members in all — instantly discussing the hazards of their jobs, from stress to toxic chemicals.

The all-day health and safety conference Saturday at Craftsmen's Hall was sponsored by the San Diego Imperial Counties Labor Council and believed to be the first such council-sponsored safety conference in the state.

Its goal, said speaker Dan Contreras, a field representative for Service Employees International Union 535, was to learn about problems common to many workplaces, and most important, to learn what union members could do to prevent them.

"It is the employer's responsibility to make the workplace safe but it's our responsibility to push employers into meeting that legal responsibility," she said. "The only people we can depend on to move us forward are us — the workers, the union."

Conference organizer Rita Judd was pleased with the turnout but the shop stewards and rank and file union members attending represented only a handful of the county's 130,000 AFL-CIO members.

"A lot of people don't feel safety is a visible union job," one union leader said. "They're apathetic. It's just like you don't care too much about prevention until you've been robbed."

But many of the conference members said they had already been robbed of safety on the job. Some recalled the deaths of coworkers at National Steel and Shipbuilding Co. two years ago. The men were killed when they breathed toxic gases in the hull of a ship.

A aircraft inspector Ken Davenport reported that he might be losing some of his hearing from working in the plant. He said sometimes he stands just a few feet away from riveting machines, but has no protection for his ears.

And a telephone operator complained about stress. There was a program to stress management to executives at her company, but nothing for rank and file workers, she and several co-workers said.

But "if those men had to sit all week with just four walls and a desk, eight hours a day, 40 ...ours a week, and you can't leave and the calls come in automatically, beep beep, beep, they'd change the order of things real fast," she said.

In speeches and workshops, union members were offered suggestions for handling serious problems. If toxic chemicals are suspected, workers have the right under federal law to know from their employer exactly what they are working with, said Art Carter, chief of California's Division of Occupational Safety and Health (Cal OSHA).

Still, if they have difficulty finding out, he said, they can tear a label from an empty canister and call, toll-free, the state's Hazard Evaluation System and Information Service for an instant explanation.

If excessive noise is the problem — and ironworker Elaine Askari said she now suffers from ringing in her ears, an early sign of hearing loss — workers can ask Cal OSHA to monitor decibel levels.

Refuse to Work

Registered nurse Joyce Spencer, coordinator of the Occupational Health and Safety Project at UCLA, said employers can ask their workers to wear ear plugs or muffs "but theoretically they're supposed to change the workplace (eventually) rather than make you wear the earplugs."

As an emergency measure, workers can do more than complain to Cal OSHA, union leaders said. If the job looks hazardous, they have the legal right to refuse to work.

Gary Booth, a union health and safety representative at Nassco, noted that shipyard painters once had a problem with oil contaminating their breathing apparatus.

The air lines for the breathing equipment also were sometimes used on pneumatic tools, he said. When the painters used the lines again, "they were breathing straight oil," Booth said, so the men refused to work. Cal OSHA was called and two days later, Booth said, the company had remedied the problem.

Getting It on Record

Booth advised, "You can refuse to work and you can say, 'I want this job monitored and I want it in the file that I've been working around this kind of chemical for 20 days — just in case, in 20 years, I come up with something.' "

Although workers have federal and state laws to protect them, enforcement is only as good as workers' vigilance, several of the speakers said.

Cal OSHA's Carter said workers should concentrate on prevention, building job safety protections into their contracts.

Despite all the laws, "the union is still your best protection on the job," Carter said.

84128-08

BEST COPY AVAILABLE

The PD can be applied to other types of reading activities, such as car manuals' descriptions of systems and parts, Readers' Digest stories, job descriptions and requirements.

SENTENCE-LEVEL ACTIVITIES

Another application of pyramid diagrams is at the sentence level. This is especially helpful when the instructor and students must follow a grammar-based curriculum or textbook. Most textbooks at the intermediate or advanced levels provide a great number of grammar drills and exercises with few opportunities for using the structures learned in a communicative way. One way to examine grammatical structures in a more cognitive way is to adapt the textbook exercises to pyramid diagrams.

As an example, one of the texts we have used deals with subordinate clauses in several chapters. We developed the exercise in Figure 7 which has several subordinate clauses within the context of dictionary definitions.

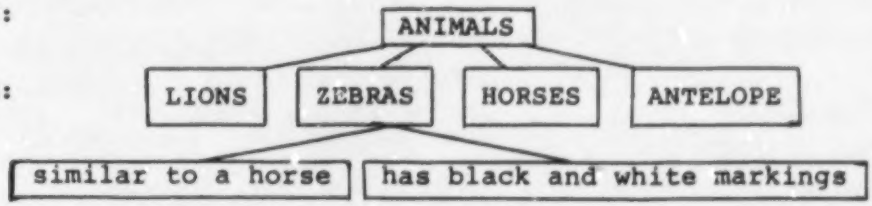
Students were first asked to analyze the idea relationships expressed in a definition. Most often, the item being defined (if it is a noun) is first described by the general category or class that it falls into, and then the item is limited by its particular attributes. So, in the first diagram a zebra is defined as an animal (or mammal) which is similar to a horse and has black and white

FIGURE 7 Definitions Activity

Definitions usually begin by stating the general class or group an iten or animal belongs to, and then go on to describe how the particular iten or animal is unique. The descriptive part of the definition is often an adjective clause.

EXAMPLE:

DIAGRAM:



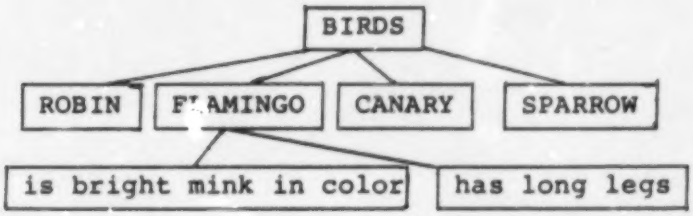
SENTENCE: (general class) (adjective clause)

A zebra is an animal which is similar to a horse and has black and white markings.

****

1

DIAGRAM:

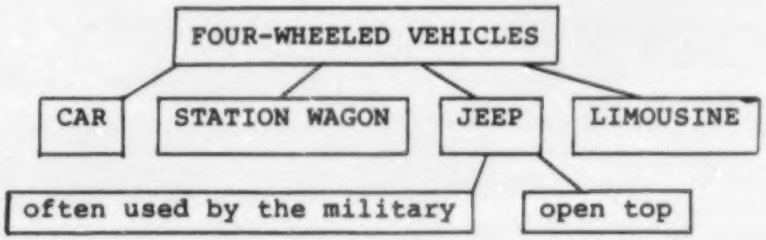


SENTENCE:

****

2

DIAGRAM:



SENTENCE:

****

3

DIAGRAM

SENTENCE: An avocado is a fruit with a dark green or purple skin.

markings. The level of generality in the diagram moves from animal - zebra - stripes, but the sentence begins with the intermediate level, the zebra, and than moves up to the general class, and then down to more specific information.

After students determine how the hierarchy works in a definition, we have them look up words in the dictionary and fill in empty diagrams for those definitions. While they are doing this, the students are reading, copying and thinking about various subordinate clauses. The last step is to have them identify the clauses as adjective clauses, adverb clauses or participials, and then write their own definitions using these structures (i.e., a (noun) is a (general class) which has (specific attributes)).

Analyzing definitions is not new to ESL classes. What is perhaps new or different here is the sequence of activities: the communicative, problem-solving exercise first, then exposure to and examination of the grammatical structure, finally the incorporation of all this into original sentences.

There is some evidence that this unorthodox sequence is a more meaningful one to students. Tracy Terrell has written that the "natural approach" to second language learning is for the student to "learn vocabulary first even if structure is non-existent." If so, then we first have to interest students in content and relationships, and introduce grammar after the learner has seen the grammatical features in use. By doing so, the instructor familiarizes students with grammar within context. This helps students

remember and acquire something meaningful, not just a drill or mechanical activity. In addition, the classroom discussions that accompany this kind of exercise, the seemingly incidental activity, is also helping students to learn to communicate and think in their new language.

LEXICAL-LEVEL ACTIVITIES

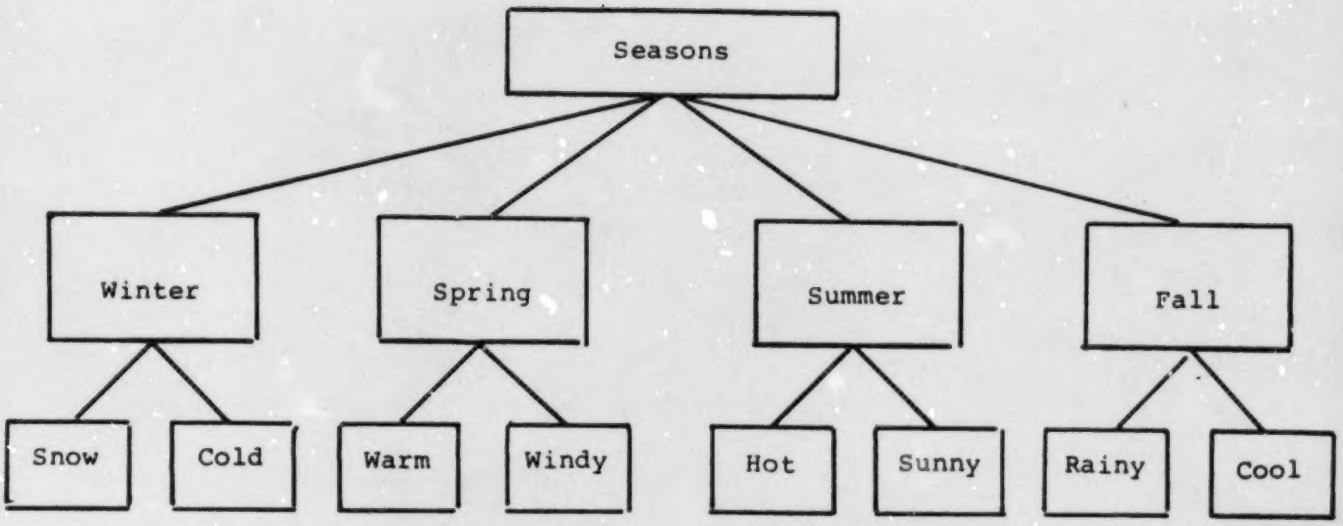
Most ESL books teach vocabulary that is related hierarchically. For example, almost every beginning textbook has a lesson on seasons and weather vocabulary. But the hierarchical structure of the information is never emphasized in most textbooks. Figure 8 exemplifies a sample PD of seasons and weather information.

Another example comes from New Horizons in English and an activity called "Odd Man Out." In the textbook, the students are given a list of four or five items and are required to identify the item that doesn't fit with the other ones. For example, refrigerator, stove, camel, washing machine, dryer. The students have to cognitively form categories or groups, but we suggest that this be done more overtly. Using the pyramid diagram makes the grouping overt as seen in Figure 9.

We also take the activity one step further in that we ask the students for the name of the group that they have formed. For low-level writers, we usually give them pyramid diagrams to fill in, but as they get used to the activity

FIGURE 8

Seasons and Weather PD

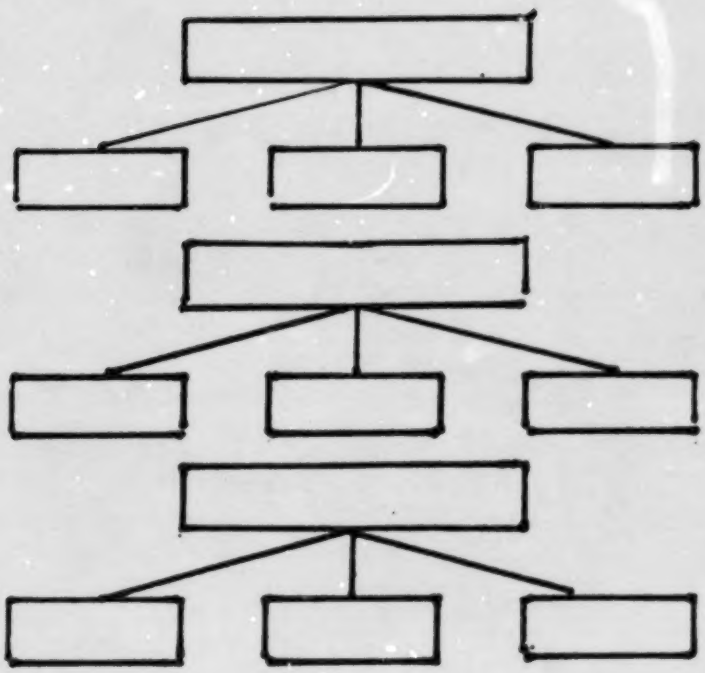


84528-07A

FIGURE 9

Lexical-Level Activity

1. refrigerator
   stove
   camel
   drier
2. suburbs
   surprise
   city
   coast
3. photograph
   picture
   bathtub
   camera



84528-06

they draw their PDs. Advanced students soon move to on outline format.

Usually as answers are put on the board, compared individually or read aloud, there is a lot of discussion because, intentionally or not, the authors of New Horizons left the exercise open to different groupings. Instead of only using the answer key in the teacher's manual, the instructor should consider answers correct as long as students can justify their grouping with a general category name. Usually the other students spontaneously approve or disapprove of novel solutions.

PDs can be applied to other types of lexical-level language, such as vegetables, fruits, money-bills/coins, systems/parts.

THEORETICAL BACKGROUND

The theoretical background for our ideas was presented in an ESL materials development seminar at San Diego State University led by Dr. Zev Bar-Lev. He suggested the general framework of using schema theory, simple schema-types, and diagrams to teach ESL, and we developed specific applications for our classes.

Schema theory proposes models for the ways ideas are structured and processed in the mind. Schemas can be defined as networks of ideas--they relate bits of

information in various ways. Recall that Carrell's basic divison was between content (idea) and formal (written or spoken) schemas. One of the content schemas is a branching hierarchy. Other content schemas include linear relationships and grids or matrices. Examples of linear schemas are chronological and causal relationships. Many studies have dealt with the English schema for narratives. For example, Carrell says that a typical English schema for simple stories would have a setting, a beginning, a development, and an ending. The grid or matrix is used in comparisons and arrays of interrelated data such as the information in want ads, bus schedules and telephone bills.

Schema theory claims that schemas dictate the way we record and organize information and that schemas are essential for comprehension in that they are used for predicting and analyzing new, incoming information. Communication is a matching, mapping or correspondence between the incoming schema and the cognitive schema used to process the input. Non-communication is a mismatch between the cognitive and the input schema.

Our approach seeks to make the schema format overt, with the goal of simplifying the understanding or matching process. Of course, it does not attempt to cover all aspects of schema theory; on the contrary, it provides the ESL instructor with a simple, usable application of the basic insights of schema theory.

BENEFITS OF THE APPROACH

There are several compelling reasons to use hierarchy diagrams in the ESL classroom:

1) The diagram is a visual representation of the logical organization of things or ideas, i.e., the content schema. The fact that it is visual makes it easier to understand; it clarifies and makes concrete an idea relationship which may be quite abstract. The kind of visual thinking which results leads students to "see" how the pieces fit together with a minimum of verbal explanation. It serves as a useful pedagogical device when explaining why a certain idea does or does not fit. This helps students overcome the two most common errors in their writing: irrelevance and excessive generality. In reading and listening, it helps students to understand the idea relationships regardless of the order that the information is given.

2) Another benefit is that diagrams focus on ideas rather than grammar (with the option of examining grammar at a later time). This means that in general there is no one right answer. Any answer that has some logical possibility is correct, regarless of grammatical correctness. Student answers are often better than the instructor's and this encourages students to demonstrate their intelligence and creativity. The openness of the exercises allows students

to push to the limits of their cognitive and linguistic abilities.

The method and the sequence of activities can be regarded as an application of the ideas and principles of Krashen and Terrell's "Natural Approach to Language Learning." Terrell believes that just as language learners pick up a second language naturally, by guessing at meanings first, and then learning grammatical features, so should they inside the classroom. Krashen says, "Believe your students can understand more than they can say. Seek above all to communicate. If you concentrate on communicating, everything else will follow." Pyramid diagrams provide the focus on communication that Krashen and Terrell say is necessary. Grammar may be introduced into the lesson, but only after the meanings and relationships of words and ideas are understood.

3) A third, incidental benefit of the method is that the classroom dynamics, especially relationships between students and instructors, change in a positive way during these activities. Because there is no single right answer, the responsibility for supplying the correct response is not left to the teacher. Students turn to the instructor and to each other for feedback about their own ideas. The class becomes a group of co-problem solvers, working together on a project. The ESL classroom becomes a place where a communicative activity is happening, and that is more dynamic and challenging than completing textbook exercises.

Finally, a related advantage is that even the least proficient language learners can make some contribution and have some success with these exercises, so language learning becomes a positive experience for the whole class.

In conclusion, using diagrams or schema-based activities is not new to ESL. Communication Starters by Judy Winn Bell-Olsen, A Conversation Book by Carver and Fotinos, and Krashen and Terrell's new text, The Natural Approach, use good grid and narrative-based exercises. We would like to see more such exercises because ESL students at all levels should be aware of and comfortable with English schemas.

BIBLIOGRAPHY

Bar-Lev, Zev. 1984. Arabic ungrammar. Teaching Language Through Literature. Vol. 23, No. 2. pp. 3-15.

-----. 1984. Hebrew hieroglyphics. Visible Language. Vol. 17, No. 4. pp. 365-379.

-----. Discourse theory and Contrastive Rhetoric. Forthcoming in Discourse Processes.

-----. Towards Superlogic. Forthcoming in ITL.

Bartlett, Sir Frederick. 1932. Remembering: A study in experimental and social psychology. London. Cambridge at the University Press.

Carrell, Patricia and Joan Eisterhold. 1983. Schema Theory and ESL Reading Pedagogy. TESOL Quarterly. Vol. 17, No. 4, pp. 553-573

Eggington, William and Thomas Ricento. 1983. Discourse Analysis as a Pedagogical Tool. CATESOL Occasional Papers. No. 9, pp. 74-85.

Hall, Edward. 1976. Beyond Culture. Garden City, New York. Anchor Press.

Johnson, Tia and Judy Sheetz-Brunetti. 1983. Using diagrams to teach reading comprehension. TECFORS. Vol. 6, No. 1. 4-7.

-----. 1983. Using simple diagrams to teach composition skills. TECFORS. Vol. 6, No. 2. 1-7.

Kaplan, Robert. 1966. Cultural Thought Patterns in Inter-Cultural Education. Language Learning. 16. pp.1-20.

Krashen, Stephen D. 1976. Formal and informal linguistic environments in language acquisition and language learning. TESOL Quarterly. 10. 2-22.

Martin, Ann. 1980. Proficiency of university level advanced ESL and native speakers of English in processing hierarchical information in context. Dissertation. University of Southern California.

Minsky, Marvin. 1977. Frame-system theory. in Thinking: readings in cognitive sciences. P.N. Johnson-Laird and P.C. Wason (eds.). Cambridge University Press.

Schultz, C. B. and F. J. DiVesti. 1972. Effects of passage organization and note taking on the selection of

clustering strategies and on recall of textual materials. Journal of Educational Psychology. Vol. 63, No. 3, pp. 244-252.

Seale, Barbara. 1978. Writing efficiently, a step-by-step composition course. Englewood Cliffs, NJ: Prentice-Hall, Inc.

Terrell, Tracey. 1977. A natural approach to second language acquisition and learning. Modern Language Journal LXI. 325-337.